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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CORRIELUS, JEAN B

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 12/08/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,513

Applicant(s)

BIRKETT ET AL.

Examiner

Jean B Corrielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 13-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-3. 6) ☐ Other: _____

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DETAILED ACTION

Claim Objections

1. Claims 1-21 are objected to because of the following informalities: claim 1, line 1, proper indefinite article should be used before apparatus. The same comment applies equally to claims 2-21 . Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 9-12 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomita US patent no.5,086,437 in view of Kamgar US patent No. 6,324,387.

Tomita discloses an apparatus fig. 1 having a plurality of filter/amplifier stages each having element 17 functionally equivalent to the claimed complex filter means for attenuating an interfering portion relative to a desired portion of the received signal controlled amplifier means 23 for amplifying the received signal control means; control means 27 for controlling the amplifier. However, Tomita does not teach the amplifier means includes a minimum gain and a maximum gain and that the control means is set to amplify the received signal with a gain value

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less than the maximum gain and greater than the minimum gain. In the same field of endeavor, Kamgar et al teaches the amplifier means 105 includes a minimum gain and a maximum gain and that the control means 110 is set to amplify the received signal with a gain value less than the maximum gain and greater than the minimum gain. See col. 5, lines 57-61.

As per claims 1 and 5, it would have been obvious to one skill in the art to incorporate such a teaching in Tomita in order to increase the performance of the receiver as taught Kamgar et al see col. 1, lines 49-51.

As per claims 2 and 3 it would have been obvious to one skill in the art to process the received signal in the IF band and/ or as a low IF in order to process low frequency signal.

A per claim 4, it would have been obvious to one skill in the art to configure the apparatus so as to receive zero If signal in order to eliminate the needs for downconverter to downconvert the received signal and at the same time minimize system's cost.

As per claim 6, the signal includes complex I and Q signals see fig. 1.

As per claim 9, the controlled amplifier means comprises a first variable gain amplifier 23 for amplifying the I signal a second variable gain amplifier 24 for amplifying the Q signal and the control means for controlling the gain of the first and second amplifiers 23 and 24.

As per claim 10, it would have been obvious to one skill in the art to configure Tomita in such a way that the input of the amplifiers are used to determine the control signal in order to increase flexibility of the apparatus.

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As per claim 11, the outputs of the amplifiers are used to determine the control signal see fig. 1.

As per claim 12 it would have been obvious to one skill in the art to configure Tomita in such a way that the control signal is generated as a function of the projected amplitude level so as to increase system's flexibility.

As per claim 18 a DC compensation circuit 25.

As per claim 19, it would have been obvious to one skill in the art to locate the DC compensation circuit in the feedback circuit and the reasons to combine would have been the same as claim 12 above.

As per claim 20, the Dc compensation circuit is a feedforward circuit see fig. 1.

As per claim 21, it would have been obvious to one skill in the art to set the minimum gain to negative value so as to satisfy system design requirement.

4. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomita US patent no.5,086,437 in view of Kamgar US patent No. 6,324,387 and further in view of Hariharan US patent No. 4,543,546.

As applied to claim 1, Tomita and Kamgar disclose every feature of the claimed invention but does not explicitly teach that the filter includes a series of single poles. In the same field of endeavor, Hariharan discloses such limitation of the claim see fig. 5 and col. 10, lines 34-36. It

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would have been obvious to one skill in the art to include such a teaching in Tomita and Kamgar so as to enhance the filter mechanism.

Allowable Subject Matter

5. Claims 13-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is (703) 305-4023. The examiner can normally be reached on Monday-Thursday from 7:00 A.M. to 5:30 P.M.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.


Jean B. Corrielus

Primary Examiner

TC-2600 11-24/03